



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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D412-702-025
Job Sheet 190132



008303

Part No: D412-702-025

Job Qty: 1 pcs

Part Name: Shoulder Harness, 4 Point Attachment, 4 Man Aft Facing



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/5/19

Job Tracking No:

Due Date: 3/15/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: IIN-D412-702-1 REV B IPP Rev:A 05.09.01 New issue KJ/JLM IPP Rev:B As per Dsi9351 07-03-14 JLM IPP Rev:C 07-07-28 As per Rev E JLM Verified By:ec IPP Rev. D 11.05.31 dsi 9559 EC verified by:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Packaging 1 - Pick Kit	1 pcs		3/15/19	0.00	0.00	Packaging 1 - 1		
							Packaging 1 - 2		
							Packaging 1 - 3		
							Packaging 1 - 4		
							Packaging 1 - 5		
							Packaging 1 - 6		
							Packaging 1 - 7		
							Packaging 1 - 8		
							Packaging 1 - 9		
							Packaging 1 - 10		
							Packaging 1 - 11		
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							Packaging 1 - 28		
							Packaging 1 - 29		
							Packaging 1 - 30		

DART Aerospace Ltd.
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CANADA
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www.dartaerospace.com



Container No: S156310

Part: D412-702-025

Job No: 190132

Serial No/Batch: S156310

Revision: B

Inspector:

Exp Date:

Instructions: TC STC SH04-7 Issue 3 of 5 A2 STG SR01997N

Plex 2/5/19 11:14 AM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
AN4-20A	Bolt	8 Ea (8 ea)	110-Packaging 1 - Pick Kit	5149257
AN4-5A	Bolt	4 Ea (4 ea)	110-Packaging 1 - Pick Kit	5155698
D3198-1	Fitting	4 pcs (4 ea)	110-Packaging 1 - Pick Kit	5061218
D3551-11	Hook And Loop Tie	4 pcs (4 ea)	110-Packaging 1 - Pick Kit	5150575
D4387-043	Harness Assembly	4 pcs (4 ea)	110-Packaging 1 - Pick Kit	5088866
MS21042L4	Nut	12 Ea (12 ea)	110-Packaging 1 - Pick Kit	5148819
NAS1149D0463J	Washer	20 Ea (20 ea)	110-Packaging 1 - Pick Kit	5150216

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Packaging 1 - Pick Kit	AN4-20A	8	294	0
	AN4-5A	4	70	0
	D3198-1	4	18	0
	D3551-11	4	41	0
	D4387-043	4	8	0
	MS21042L4	12	3,427	0
	NAS1149D0463J	20	4,796	0

Part Specifications

Specifications could not be found.

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	Skid-tube ☐ Machining ☐ Large Fab ☐	DEPARTMENT/PROCESS Cross tube ☐ Small Fab ☐ Finishing ☐	Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐	Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :			MRB (QSI042)			
Description Work Order Deviation			Disposition					
						Completed By		
						Lead hand / Supervisor		
						QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread						
Other/Details:								

QTY -021	QTY -023	QTY -025	QTY -027	QTY -029	QTY -035	QTY -081	Part Number	Description
X							D412-702-021	Dart 13-Man Shoulder Harness Kit, 4-point
	X						D412-702-023	Dart 5-Man Forward Facing Shoulder Harness Kit, 4-point
		X					D412-702-025	Dart 4-Man Aft Facing Shoulder Harness Kit, 4-point
			X				D412-702-027	Dart 4-Man Side Facing Shoulder Harness Kit, 4-point
				X			D412-702-029	Dart 1-Man Forward Facing Shoulder Harness Kit, 4-point
					X		D214-702-035	Dart 5-Man Aft Facing Shoulder Harness Kit, 4-point, for Bell 214B/B-1
						X	D412-702-081	Dart 2-Man Aft Facing Shoulder Harness Kit, 4-point
1	1		1	1			D412-702-069	GROMMET KIT
2	2						D3195-041	BRACKET
2	2						D3195-043	BRACKET
1	1			1			D3196-1	BAR
1			1				D3196-3	BAR
1			1				D3196-4	BAR
2	2						D3197-041	BAR
4		4				2	D3198-1	FITTING
2	2						D3268-1	PLACARD
9	5		4	1			D3446-041	HARNESS ASSEMBLY, 4 POINT
4		4				2	D3446-043	HARNESS ASSEMBLY, 4 POINT
					5		D3446-045	HARNESS ASSEMBLY, 4 POINT
13	5	4	4	1	5	2	D3551-11	HOOK AND LOOP TIE
2	2						D3546-1	CLIP
4		4				2	AN4-5A	BOLT
4	4						AN4-13A	BOLT
8		8				4	AN4-20A	BOLT
20		20				10	AN960JD416	WASHER (OR NAS1149D0463J)
12		12				6	MS21042L4	NUT (OR MS21042-4)
8	2		6	2			MS24694-S152	SCREW
8	2		6	2			MS24694-S154	SCREW

QTY -069	Part Number	Description
X	D412-702-069	GROMMET KIT
24	D3619-2	GROMMET
1	D3619-2T1	HOLE PUNCH
1	D3619-2T2	STRIKER BLOCK
1	D3619-2T3	PUNCH
1	D3619-2T4	DIE

DART SERVICE INSTRUCTION

TO AMEND IIN-D412-702-1 REV. A,
AND ICA-D412-702 REV. 4 OR EARLIER APPROVED REVISIONS
REF. TCCA STC: SH04-7
REF. FAA STC: SR01997NY
REF. EASA STC: EASA.IM.R.S.00710

PURPOSE

The purpose of this DSI is to outline the replacement of existing D3446-041/-043 Shoulder Harnesses with the new and improved D4387-041/-043 Shoulder Harnesses.

CHANGE

For the following Kits, the D4387-041 and D4387-043 Shoulder Harnesses respectively replace the D3446-041 and D3446-043 Shoulder Harnesses as follows:

Old Harness P/N	Used On	New Harness P/N	Effectivity
D3446-041	D412-702-021	D4387-041	CHG 003 and subsequent
	D412-702-023		CHG 002 and subsequent
	D412-702-027		
	D412-702-029		
D3446-043	D412-702-021	D4387-043	CHG 003 and subsequent
	D412-702-025		CHG 002 and subsequent

Customers who want to upgrade their shoulder harnesses may replace their existing D3446-041/-043 with D4387-041/-043 per this service instruction.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: 
D. SHEPHERD (DE # 02)
DATE: 11.05.09
CERT. NO.: SH04-7
ISSUE NO.: 3

A	NEW ISSUE	MB	11.05.09
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9559	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		HARNESS CHANGE	NTS
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